

LOCTITE® SI 5045™

Known as LOCTITE® 5045™
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PRODUCT DESCRIPTION

LOCTITE® SI 5045™ provides the following product characteristics:

Technology	Silicone
Chemical Type	Alkoxy silicone
Appearance (uncured)	Translucent paste
Components	One component - requires no mixing
Viscosity	Paste
Cure	Room temperature vulcanizing (RTV)
Application	Bonding, Sealing, or Coating
Specific Benefits	- Non-corrosive - Enhances load bearing and shock absorbing characteristics of the bond area - High Strength

LOCTITE® SI 5045™ is a one component RT cure silicone product designed for bonding, sealing, and coating of components especially for the military, automotive and industrial markets. The non-slumping nature of this product makes it ideal for reinforcing and strain relieving delicate components. LOCTITE® SI 5045™ resists weathering, moisture, ozone and retains its properties through severe environments. This product is typically used in applications up to 200 °C (392°F).

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 23 °C	1.14
Solids/Non-Volatile Content, %	92
Extrusion Rate, g/min, Pressure 0.62 Mpa, 15 seconds @ 25°C Semco Cartridge	40

TYPICAL CURING PERFORMANCE

Tack Free Time

Tack Free time is defined as the time required to achieve a tack free surface.

Tack Free Time, hours	5
Cured @ 23 °C / 50% RH	

TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 1 week @ 23°C / 50% RH

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2, K ⁻¹	3×10 ⁻⁴
Coefficient of Thermal Conductivity, ASTM E 1225, W/(m·K)	0.2
Water Vapor Trans. Rate, ASTM E96, g/(h·m ²)	0.48
Water Absorption, ISO 62, % 24 hours in water @ 23°C	0.01
Shore Hardness, ISO 868, Durometer A	25
Elongation, at break, ISO 37, %	500
Tensile Strength, ISO 37	N/mm ² 3 (psi) (430)
Tear Strength, ISO 34-1, Die B	N/mm 40 (lb/in) (230)

Electrical Properties:

Dielectric Breakdown Strength, IEC 60243-1, kV/mm	18
Volume Resistivity, IEC 60093, ohm-cm	4×10 ¹⁵
Dielectric Constant / Dissipation Factor, IEC 60250:	
100 Hz	3.0 / 0.006
1 MHz	3.1 / 0.01

Adhesive Properties:

Peel Adhesion (pli method), ASTM D 903:	
Aluminum (primed)	N/mm 13 (lb/in) (75)
Steel (primed)	N/mm 8.7 (lb/in) (50)

TYPICAL ENVIRONMENTAL RESISTANCE

Heat Resistance

Cured for 1 week @ 200°C	
Shore Hardness, ISO 868, Durometer A	45
Elongation at break, ISO 37, %	330
Tensile Strength, ISO 37	N/mm ² 3 (psi) (430)

Hydrolytic Stability

Cured for 28 days @ 95°C / 98% RH	
Shore Hardness, ISO 868, Durometer A	29
Elongation at break, ISO 37, %	500
Tensile Strength, ISO 37	N/mm ² 5 (psi) (730)

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

Directions For Use:

1. For best performance bond surfaces should be clean and free from grease.
2. Full performance properties will develop over 72 hours.
3. Moisture curing begins immediately after the product is exposed to the atmosphere, therefore parts to be assembled should be mated within a few minutes after the product is dispensed.
4. Excess material can be easily wiped away with non-polar solvents.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Henkel representative.

Product Specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Approval and Certificate

Please contact your local Henkel representative for related approval or certificate of this product.

Data Ranges

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23 °C / 50% RH = 23±2 °C / 50±5% RH.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Disclaimer

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